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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/621,875

07/16/2003

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IL-10387B

1737

7590

02/09/2005

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EXAMINER

NADAV, ORI

ART UNIT

PAPER NUMBER

2811

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/621,875

Applicant(s)

WOLFE ET AL

Examiner

ori nadav

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant states that the semiconductor device recited in amended claims 1-13 is illustrated in the embodiment of figure 4C. There is no support in the embodiment of figure 4C for a semiconductor device consisting of structural elements in the following order:

a plastic substrate,

a layer fabricated with pulsed radiation 12, said layer that can be fabricated with pulsed radiation positioned above the plastic substrate,

a layer that can be damaged by said pulsed radiation 10, said layer that can be damaged by said pulsed radiation positioned above said plastic substrate and operatively connected to said layer fabricated with pulsed radiation, and

a narrowband reflective coating layer 11, said narrowband reflective coating layer positioned above said layer that can be damaged by said pulsed radiation, positioned

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above said plastic substrate, and operatively connected to said layer that can be damaged by said pulsed radiation, and

wherein said narrowband reflective coating layer is positioned over said layer that can be damaged by said pulsed radiation for reflecting said pulsed radiation and protecting said layer that can be damaged by said pulsed radiation, as recited in claim 1, because the embodiment of figure 4C describe a semiconductor device consisting of five layers, and because the semiconductor device in the embodiment of figure 4C does not consist of structural elements in the order recited in claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carey et al. (5,817,550).

Regarding claim 1, Carey et al. teach in figure 2 and related text a semiconductor device consisting of structural elements in the following order:

a plastic substrate 10,

a layer fabricated with pulsed radiation 12, said layer that can be fabricated with pulsed radiation positioned above the plastic substrate,

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a layer that can be damaged by said pulsed radiation 11, said layer that can be damaged by said pulsed radiation positioned above said plastic substrate and operatively connected to said layer fabricated with pulsed radiation, and

a narrowband reflective coating layer 16, said narrowband reflective coating layer positioned above said layer that can be damaged by said pulsed radiation, positioned above said plastic substrate, and operatively connected to said layer that can be damaged by said pulsed radiation, and

wherein said narrowband reflective coating layer is positioned over said layer that can be damaged by said pulsed radiation for reflecting said pulsed radiation and protecting said layer that can be damaged by said pulsed radiation.

Although Carey et al. do not explicitly state that layer 11 is a narrowband reflective coating layer, wherein said narrowband reflective coating layer reflects said pulsed radiation and protecting said layer that can be damaged by said pulsed radiation, these features are inherent in Carey et al.'s device, because layer 11 comprises the same material as that of the claimed layer.

Carey et al. do not teach forming the semiconductor device in the stated order.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the semiconductor device in the stated order in order to form the device according to a specific criteria given by the application in hand.

Regarding claim 2, Carey et al. teach in figures 1 and 2 and related text a layer that can be damaged by said pulsed radiation is low temperature plastic.

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Regarding claim 3, Carey et al. teach in figures 1 and 2 and related text a reflective layer is single layer or multiple layers for narrowband or broadband reflection.

Regarding claim 4, Carey et al. teach in figures 1 and 2 and related text a reflective coating layer is a narrow band reflectance coating.

Regarding claim 9, Carey et al. teach in figures 1,2 and 3A and related text an insulating layer 11, 16 operatively connected to said layer that can be damaged by said pulsed radiation, and operatively connected to said narrowband reflective coating layer, for reflecting said pulsed radiation.

Regarding claim 11, Carey et al. teach in figures 1 and 2 and related text said layer that can be damaged by pulsed radiation is polyester (column 3, line 40).

Regarding claims 5-8 and 12-13, if layer 16 is taken as the reflective coating layer, then Carey et al. teach a reflective coating layer comprises the materials SiNx (or HfOx) and SiO2 (column 4, lines 18-20). Note that substitution of materials is not patentable even when the substitution is new and useful. *Safetran Systems Corp. v. Federal Sign & Signal Corp.* (DC NIII, 1981) 215 USPQ 979.

Regarding the claimed limitations of a reflective coating layer that has a high reflectance in the UV, greater than 70% for wavelengths between 300nm and 335nm, these

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features are inherent in Carey et al.'s device, because Carey et al.'s structure is identical to the claimed structure.

Regarding the process limitations recited in claim 10 ("a silicon film that is doped by said pulsed radiation annealing" and "a layer fabricated with pulsed radiation that has been fabricated with high intensity radiation sources"), these would not carry patentable weight in this claim drawn to a structure, because distinct structure is not necessarily produced. Note that a "product by process" claim is directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessmann*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); and *In re Marosi et al.*, 218 USPQ 289, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.

Response to Arguments

Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

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Papers related to this application may be submitted to Technology center (TC) 2800 by facsimile transmission. Papers should be faxed to TC 2800 via the TC 2800 Fax center located in Crystal Plaza 4, room 4-C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Group 2811 Fax Center number is (703) 308-7722 and 308-7724. The Group 2811 Fax Center is to be used only for papers related to Group 2811 applications.

Any inquiry concerning this communication or any earlier communication from the Examiner should be directed to *Examiner Nadav* whose telephone number is **(571) 272-1660**. The Examiner is in the Office generally between the hours of 7 AM to 4 PM (Eastern Standard Time) Monday through Friday.

Any inquiry of a general nature or relating to the status of this application should be directed to the **Technology Center Receptionists** whose telephone number is **308-0956**

A handwritten signature in black ink, appearing to read 'Ori Nadav', with a stylized flourish at the end.

O.N.
2/7/05

ORI NADAV
PRIMARY EXAMINER
TECHNOLOGY CENTER 2800